



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

20NR-43**Job Sheet 192513**

Part No: 20NR-43

Job Qty: 5 pcs

Part Name: Side Plate - Cover



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 3/27/19

Job Tracking No:

Due Date: 3/29/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG 20NR-43 Rev. 4 IPP Rev. A 18.07.04 new issue DP Verify DD

Ship Via:

Bill of Materials**Job Routing**

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Waterjet - Omax - 1	5 pcs	3/29/19	3/29/19	0.00	1.00	Waterjet - Omax		2/19/04/03
110	QC 2	5 pcs	3/29/19	3/29/19	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		2/19/04/03
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 56		
							QC 2 - 57		
							QC 2 - 62		
							QC 2 - 63		
							QC 2 - 8		
							QC 2 - 66		



Container No: S169138



Part: 20NR-43

Job No: 192513

Serial No/Batch: S169138

Revision: 4

Inspector:

Exp Date:

Instructions:

Date: 05/09/19

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

				QC 2 - 64	
				QC 2 - 65	
				QC 2 - 5	
115	Conventional Mill - 1 - B4B	5 pcs	3/29/19 0.00 1.67	Conventional Mill - 1 - B4B	
				Conventional Mill - 2 - B4B	
116	QC 2	5 pcs	3/29/19 0.00 1.67	QC 2 - 1	
				QC 2 - 12	
				QC 2 - 14	
				QC 2 - 17	
				QC 2 - 19	
				QC 2 - 2	
				QC 2 - 20	
				QC 2 - 22	
				QC 2 - 23	
				QC 2 - 25	
				QC 2 - 32	
				QC 2 - 33	
				QC 2 - 35	
				QC 2 - 39	
				QC 2 - 4	
				QC 2 - 40	
				QC 2 - 44	
				QC 2 - 45	
				QC 2 - 48	
				QC 2 - 49	
				QC 2 - 50	
				QC 2 - 51	
				QC 2 - 52	
				QC 2 - 56	
				QC 2 - 57	
				QC 2 - 62	
				QC 2 - 63	
				QC 2 - 8	
				QC 2 - 66	
				QC 2 - 64	
				QC 2 - 65	
				QC 2 - 5	
120	NV5000 - 1 - B4B	5 pcs	3/29/19 0.00 5.00	NV5000 - 1 - B4B	PT 19-04-13 J.C.L.
				NV5000 - 2 - B4B	
130	QC 2	5 pcs	3/29/19 0.00 0.00	QC 2 - 1	PT 19-04-13
				QC 2 - 12	
				QC 2 - 14	
				QC 2 - 17	
				QC 2 - 19	
				QC 2 - 2	
				QC 2 - 20	
				QC 2 - 22	
				QC 2 - 23	
				QC 2 - 25	
				QC 2 - 32	J.C.L. 19-04-20
				QC 2 - 33	
				QC 2 - 35	
				QC 2 - 39	
				QC 2 - 4	
				QC 2 - 40	
				QC 2 - 44	
				QC 2 - 45	

					QC 2 - 48	
					QC 2 - 49	
					QC 2 - 50	
					QC 2 - 51	
					QC 2 - 52	
					QC 2 - 56	
					QC 2 - 57	
					QC 2 - 62	
					QC 2 - 63	
					QC 2 - 8	
					QC 2 - 66	
					QC 2 - 64	
					QC 2 - 65	
					QC 2 - 5	
140	QC 8	5 pcs	3/29/19	0.00 0.00	QC 8 - 12	mk 19/05/03
					QC 8 - 14	
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	
					QC 8 - 67	
					QC 8 - 1 (A)	
					QC 8 - 47	
					QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
170	Outsource - 13 - Zinc Plating	5 pcs	3/29/19	0.00 0.00	Group Atech	2019-05-03 Kd
180	Packaging 2-1 - Receive - B4B	5 pcs	3/29/19	0.00 0.00	Packaging 2 - 1 - B4B	MAY 09 2019
					Packaging 2 - 2 - B4B	
					Packaging 2 - 3 - B4B	
					Packaging 2 - 5 - B4B	
					Packaging 2 - 4 - B4B	
					Packaging 2 - 6 - B4B	
					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	
					Packaging 2 - 19 - B4B	

				Packaging 2 - 20 - B4B	
				Packaging 2 - 21 - B4B	
				Packaging 2 - 22 - B4B	
				Packaging 2 - 23 - B4B	
				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 - B4B	
				Packaging 2 - 26 - B4B	
				Packaging 2 - 27 - B4B	
				Packaging 2 - 28 - B4B	
				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
190	QC 6	5 pcs	3/29/19	0.00 0.00	QC 6 - 9
					QC 6 - 68
					QC 6 - 61
191	Small Fab - 2 - B4B	5 pcs	3/29/19	0.00 0.50	Small Fab - 1 - B4B
					Small Fab - 2 - B4B
					Small Fab - 3 - B4B
					Small Fab - 4 - B4B
					Small Fab - 5 - B4B
					Small Fab - 6 - B4B
					Small Fab - 7 - B4B
192	QC 5	5 pcs	3/29/19	0.00 0.00	QC 5 - 10
					QC 5 - 12
					QC 5 - 17
					QC 5 - 18
					QC 5 - 19
					QC 5 - 22
					QC 5 - 24
					QC 5 - 3
					QC 5 - 43
					QC 5 - 49
					QC 5 - 51
					QC 5 - 58
					QC 5 - 68
					QC 5 - 9
					QC 5 - 50
					QC 5 - 30
					QC 5 - 40
200	Packaging 3-1 - Stock - B4B	5 pcs	3/29/19	0.00 0.00	Packaging 3 - 1 - B4B
					Packaging 3 - 2 - B4B
					Packaging 3 - 3 - B4B
					Packaging 3 - 4 - B4B
					Packaging 3 - 5 - B4B
					Packaging 3 - 6 - B4B
					Packaging 3 - 7 - B4B
					Packaging 3 - 8 - B4B
					Packaging 3 - 9 - B4B
					Packaging 3 - 10 - B4B
					Packaging 3 - 11 - B4B
					Packaging 3 - 12 - B4B
					Packaging 3 - 13 - B4B
					Packaging 3 - 14 - B4B
					Packaging 3 - 15 - B4B

DAS

MAY 13 2019 40
9-89

AP 2019/05/24



				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	DAE
				Packaging 3 - 35 - B4B	21
				Packaging 3 - 36 - B4B	9-89 MAY 24 2019
210 QC 21 - SA	5	3/29/19	0.00 0.00	QC 21 - SA - 21	DAE
	pcs			QC 21 - SA - 70	21 MAY 24 2019
				QC 21 - SA - 53	9-89

Part Op **100** - 1-Cut as per DWG. DWG. Rev: 4 PROG. Rev: 4 2-Deburr if necessary
 Descriptions: **110** - (QC2- Inspect parts off machine FAI/FAIB)
115 - 1-Machine as per DWG. Face to size as per drawing 2-Deburr
120 - 1-Machine as per folio FC717 FOLIO REV: AA DWG REV: 4 2-Deburr
130 - (QC2- Inspect parts off machine FAI/FAIB)
140 - QC8- Inspect parts - second check)
170 - -Issue P/O; _____ -Zinc plate, ASTM B633 TYPE 2 SC2 -Color; yellow -Material type; 4140 -Certificate of
 Conformity is required
180 - (Receive & Inspect for Damage & Mat'l Certs)
190 - (QC6- All purchased or subcontracted products)
191 - Laser etch as per drawing detail A
192 - (QC5- Inspect part completeness to step on W/O)
200 - (Identify as per dwg & Stock Location: _____)
210 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MT-4140-S-0.500	AISI 4140 Steel Sheet	5.5500 sf (1.11 ea)	100-Waterjet - Omax - 1	5165699

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Waterjet - Omax - 1	MT-4140-S-0.500	6	48	0

Part Specifications

Specifications could not be found.

Plex 3/27/19 8:35 AM Dart.lajeunesse.marie

192573

DART AEROSPACE LTD		Work Order:	190618
Description: <i>side plate cover</i>		Part Number:	<i>20NR-43</i>
Inspection Dwg:	Rev: <i>4</i>	Page 1 of 1	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
	<i>0.010</i>	<i>0.0075</i>	✓		<i>micrometer / height gage</i>	
<i>0.055</i>	<i>-0.002 / +0.005</i>	<i>0.055 / 0.058</i>	✓		<i>dial indicator</i>	
<i>0.460</i>	<i>H/-0.005</i>	<i>0.460</i>	✓		<i>PT 05</i>	
<i>2.095</i>	<i>H/-0.005</i>	<i>2.095 / 2.098</i>	✓		<i>PT 05</i>	<i>WT cutt edge</i>
<i>0.500</i>	<i>-0.004 / +0.006</i>	<i>0.499</i>	✓		<i>pin</i>	
<i>0.625</i>	<i>-0.001 / +0.003</i>	<i>0.628</i>	✓		<i>pin</i>	
<i>0.375</i>	<i>-0.001 / +0.006</i>	<i>0.376</i>	✓		<i>pin</i>	
<i>0.632</i>	<i>-0.001 / +0.008</i>	<i>0.633</i>	✓		<i>pin</i>	
<i>0.126</i>	<i>-0.001 / +0.005</i>	<i>0.126</i>	✓		<i>pin</i>	
<i>0.38</i>	<i>H/-0.010</i>	<i>0.385</i>	✓		<i>pin</i>	
<i>3/8-24</i>	<i>70 / no go</i>	<i>70</i>	✓		<i>40 / no go</i>	
<i>1.000</i>	<i>-0.001 / +0.000</i>	<i>1.000</i>	✓		<i>pin</i>	
<i>0.130</i>	<i>-0.000 / +0.005</i>	<i>1.133</i>	✓		<i>pin</i>	
<i>0.125</i>	<i>+0.000 / -0.001</i>	<i>0.1255</i>	✓		<i>dial indicator</i>	
<i>0.2512</i>	<i>-0.000 / +0.0013</i>	<i>0.2512</i>	✓		<i>pin</i>	
<i>0.38</i>	<i>H/-0.010</i>	<i>0.380</i>	✓		<i>pin</i>	
<i>0.130</i>	<i>-0.001 / +0.005</i>	<i>1.383</i>	✓		<i>pin</i>	
<i>0.125</i>	<i>-0.001 / +0.000</i>	<i>0.1245</i>	✓		<i>dial indicator</i>	
<i>0.6253</i>	<i>-0.000 / +0.0004</i>	<i>0.6257</i>	✓		<i>telescopic gage</i>	<i>0.0007 plating / side</i>
<i>(G) 9.955</i>	<i>H/-0.005</i>	<i>9.952</i>	✓		<i>CNC-02</i>	
<i>(G) 9.564</i>	<i>H/-0.005</i>	<i>9.564</i>	✓		<i>PT 05</i>	
<i>(G) 10.378</i>	<i>H/-0.005</i>	<i>10.375</i>	✓		<i>CNC-02</i>	
<i>(G) 9.021</i>	<i>H/-0.005</i>	<i>9.021</i>	✓		<i>PT 05</i>	
<i>0.7.210</i>	<i>H/-0.005</i>	<i>7.205</i>	✓		<i>height gage</i>	
<i>0.6.600</i>	<i>H/-0.005</i>	<i>6.600</i>	✓		<i>height gage</i>	
<i>0.400</i>	<i>H/-0.010</i>	<i>0.375</i>		✓		<i>water get under 20 part</i>

Measured by: <i>PJ</i>	Checked by: <i>[Signature]</i>	QC Inspector:
Date: <i>11-09-13</i>	Date: <i>17/05/03</i>	Date:

Engineering Approval: (If necessary)	Date:
---	-------

Rev	Date	Change	Revised by	Approved
A	14.07.31	New Issue	KJ	

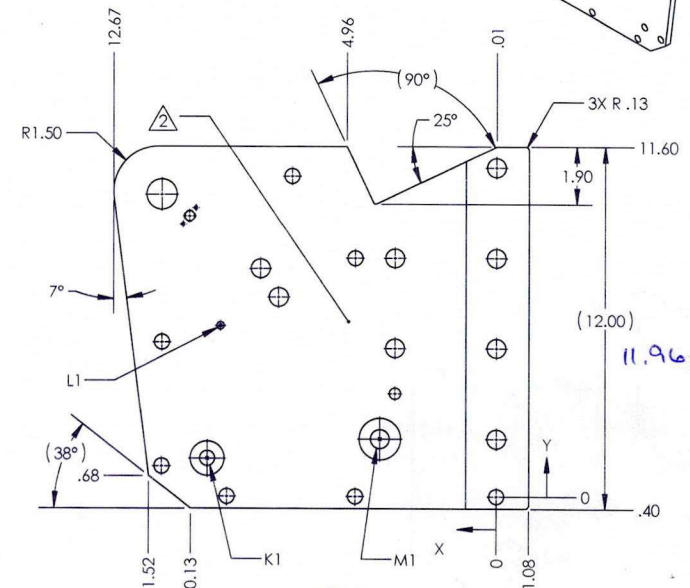
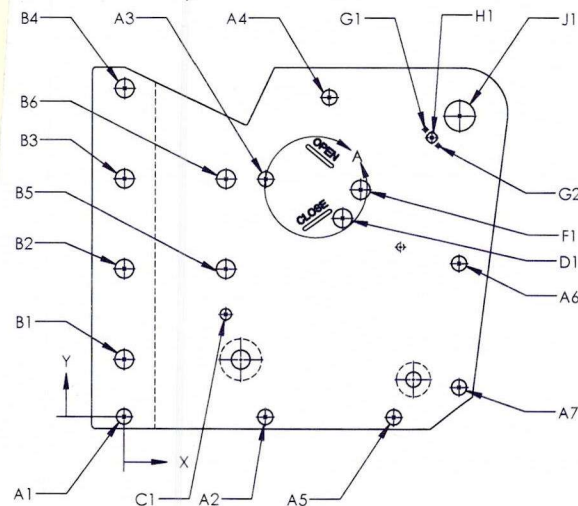
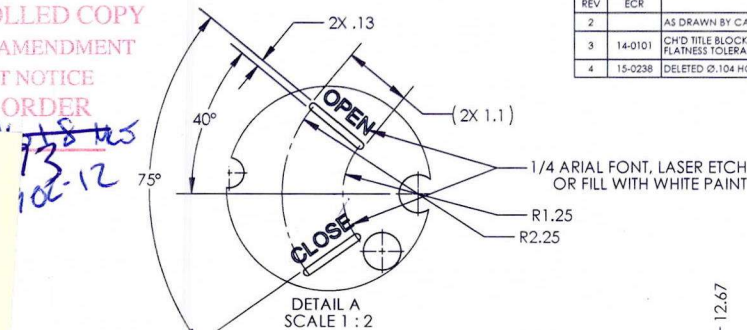
SHOP COPY

RETURN TO
ENGINEERING

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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2		AS DRAWN BY CANAM	7/18/2013	CF3	
3	14-0101	CH'D TITLE BLOCK WAS RED BARN IS DART. ADDED MACHINE ENGRAVE NOTE. ADDED GEOMETRIC FLATNESS TOLERANCE OF .010.	7/30/2014	DJN	RW
4	15-0238	DELETED Ø.104 HOLES E1 & E2.	9/24/2015	DPD	JAG



NOTES:

- 1 STRESS RELIEF AND GROUND.
- 2 MACHINE ENGRAVE BATCH NUMBER.

DART AEROSPACE	
TITLE SIDE PLATE - COVER	
DWG NO. 20NR-43	REV 4
MAT'L 4140/4142	DRAWN BY: CANAM
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
.XXX ± .005	APPROVED <i>D Weil</i>
.XX ± .01	DATE
X ± .1	FINISH CAD PLATE YELLOW
1. BREAK ALL SHARP EDGES .015 x 45°	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE 1:4	DATE 12/1/1995
SHEET 1 OF 1	

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS
			20NR-43	1	SIDE PLATE - COVER	4140/4142	

600.1325

158-125
13-12
100-12

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: <u>192513</u> Part No. <u>20NR-43</u>	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☒ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐									
Date : <u>9/04/15</u>		Sequence #: <u>120</u>		QTY Affected : <u>1</u>		MRB (QSI042)					
Description Work Order Deviation				Disposition							
<u>the dim .400" was .375"</u>				SCRAP MEF 3 May 2019							
								Completed By <u>PS</u> <u>19-04-15</u>			
								Lead hand / Supervisor <u>MEL/05/02</u>			
								QC / QA Coordinator <u>DAS</u> <u>68</u> <u>9-89</u> <u>MAY 14 2019</u>			
Root Cause Operator ☐ Manufacturing Process ☒ Equip/Tooling ☐ Handling/Presservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐		FAULT CATEGORY Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☐									
Other/Details:											



Container No: S169138



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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 813 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 04/03/19



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043374



Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

Attention: Grenon, Sylvie

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB043374

PO Date: 5/3/19

Due Date: 5/10/19

**Purchase Order
Revision:**

Revision Date:

Ship-To Contact: Phone:

Via: Ground

Pymt Terms: Net 60

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	192513	20NR-43	Side Plate - Cover -Issue P/O; -Zinc plate, ASTM B633 TYPE 2 SC2 -Color; yellow -Material type; 4140 -Certificate of Conformity is required	Firmed	-	5/10/19	5 pcs	0 pcs	5 pcs	\$27.00/pcs	\$135.00
				SX		MAY 09 2019					
2	192512	20NR-09	Side Plate - Solenoid -Issue P/O; -Zinc plate, ASTM B633 TYPE 2 SC2 -Color; yellow -Material type; 4140 -Certificate of Conformity is required	Firmed	-	5/10/19	6 pcs	0 pcs	6 pcs	\$27.00/pcs	\$162.00
				6X		MAY 09 2019					
Grand Total:											\$297.00

DAS
40
9-89



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043374



Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

A handwritten signature in black ink, appearing to be "J. Guerin", written over the "Order Notes" section.

Plex 5/6/19 10:18 AM Dart.Guerin.Kimberley



Certificat de Conformité / Certificate of Compliance

(018964-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.grouppaltech.com

Bon de Livraison / Packing Slip

018964- 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.		Bon de commande Client Customer Purchase Order No.			
07-May-2019		Jessie Boisvert			POHB043374			
#Ligne Line#	No. de Série / # Pièce Part Number /Line Item Details	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	20NR-43 Rev.	20NR-43 01 -ZINC-YELLOW [ZINC YELLOW] OLD YELLOW CHROMATE, 96 hours ASTM B633 TYPE2 SC2	ZINC CH	5	5	0	0	0
2	20NR-09 Rev.	20NR-09 01 -ZINC-YELLOW [ZINC YELLOW] OLD YELLOW CHROMATE, 96 hours ASTM B633 TYPE 2 SC2	ZINC CH	6	6	0	0	0

RECEIVED

MAY 08 2019

DART AEROSPACE LTD.

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.